Landbird Monitoring Protocol for Klamath Network Parks

Standard Operating Procedure (SOP) #2: Training Observers

Version 1.0

Revision History Log:

Previous Version	Revision Date	Author	Changes Made	Reason for Change	New Version

This SOP explains the procedures for training observers, including survey training, first aid, safety, emergency procedures, backcountry rules and ethics, data entry, and training tracking.

Survey Training

Point Count Surveys

Training will cover point count, distance estimation, vegetation survey, and data entry methodology. It is the responsibility of the Project Lead to set up and conduct the training associated with point count surveys.

Bird Identification

For this monitoring program to produce meaningful results, all observers must be fully competent at identifying landbirds within the Klamath Network (KLMN) by sight and sound (Appendix D lists bird species likely to be encountered at each KLMN park). Every effort must be made to recruit and hire observers who are proficient or nearly proficient at identifying species in the Klamath Region by sight and sound. If they are not skilled at identifying birds in the Klamath Region, then they should be proficient at identifying birds from other regions by sight and sound and demonstrate enthusiasm and an ability to quickly learn to identify new species (SOP #1: Preparations and Equipment). No matter how well executed the training session is, most observers who do not have substantial birding experience will not be adequately prepared to conduct point counts by the end of the training session.

Soon after being hired, technicians should be sent training materials (SOP #1: Preparations and Equipment) and be urged to begin preparing themselves prior to the start of the training session. In addition to observing and listening to birds in the field, field technicians and interns should spend time studying field guides, listening to recordings, and using instructional software to review plumages and vocalizations to test themselves.

SOP #2: Training Observers (continued).

Point Count Survey Protocol

In addition to honing bird identification skills, point count surveyors should review this protocol prior to the point count training. Surveyors will attend a 2-day point count training workshop lead by the Project Lead. During the training, simultaneous point count surveys and vegetation surveys will be completed in the field. Throughout the training session, every day will begin with the technicians completing simultaneous point count surveys at sunrise, either with the trainer(s) (usually the Project Lead, perhaps with assistance from the NPS Contact, or another qualified person) or in small groups. While conducting these practice point counts, technicians should adhere to all aspects of the field protocol (SOP #5: Conducting VCP Point Count Surveys) with one possible exception; it is often more useful to shorten the duration of the practice point counts to 3 minutes rather than 5 minutes. This makes it easier for observers to remember when and where they heard specific vocalizations when they are discussing their results after the point count. The crew should visit as wide a variety of habitats and locales as possible during the training session, to maximize the number of species encountered in the field.

Distance Estimation

Training to estimate distances to birds should follow a series of steps. For observers who are already competent at identifying birds by sight and sound, one full day of training following these guidelines is usually all that is necessary to be able to estimate distances within ±10%. Surveyors recalibrate themselves the afternoon before a bird survey begins.

1. Begin by placing flagging at 10 m, 25 m, 50 m, and 100 m from a central point and having observers estimate distances to trees, rocks, and flagging from the "station."

2. Have each observer place flagging at four or five locations visible from the station, and then have everyone in the group record distances to each flag in a field book. Distances should be estimated to the nearest meter. Then, use a tape measure or laser rangefinder to measure the distance to each flag, and have each person compare his or her initial estimate to the actual distance. Repeat this exercise at several sites with both open and closed vegetation until observers can consistently estimate distances to within ±10% of the actual distance.

3. Half of the group should place themselves at various distances away from the station, and quietly wait until a bird vocalizes near them. The other half of the group should remain at the station, and estimate the distance to any birds that vocalizes. Horizontal distances should be estimated, as if a plumb bob was lowered to the ground from the bird's location. If possible, observers should visually identify the tree or branch where they think the bird is, and estimate the horizontal distance to an object that they can see directly below where they think the bird is vocalizing. If the vegetation is too thick to see the tree or shrub, the observer should not move around to get a better view, but rather estimate the distance from where they are standing. The observer closest to the bird should then indicate where the bird was vocalizing from and measure the distance to the point directly under the bird from the station using a tape measure or laser rangefinder. This is a slow but important part of the training and should be repeated until observers have experience with estimating distances to a number of different species and call or song types.

4. Continue distance estimation training during simultaneous point count surveys. Divide observers into small groups (five people or less) and conduct 5-minute counts from the same location. At the end of each count, have the observers compare notes and discuss any discrepancies in the species detected and the estimated distances. Remember that the distance to where the bird was first detected should be recorded, so if a bird flies towards the station, the distance where it was first heard or seen is recorded, not the closest distance or where it lands. Continue these simultaneous counts until there is consistency among observers with regards to the species and distances recorded.

Vegetation Survey Protocol

Technicians should be proficient with identification of trees and shrubs in the Klamath Region or be proficient with using a taxonomic key to identify all plants (SOP #1: Preparations and Equipment). Training will include a presentation of the specifics of the protocol. The crew should also practice collecting habitat data, as a group, in order to standardize number of vegetation layers, canopy cover assessment, and DBH estimates (SOP #8: Conducting Vegetation Surveys). Practice should occur in multiple habitats and should continue until crew-wide standardization is achieved.

Recording Data

Technicians must be instructed on how to complete each of the data forms and have an opportunity to practice completing them during training, so that questions can arise and be resolved before official data collection begins.

Certifying Observers to Conduct Point Counts

Before they can collect point count data for the KLMN landbird monitoring program, technicians must pass a rigorous bird identification exam. The exam involves identifying approximately 60 recorded vocalizations, including all the more common landbird species in the parks and many of the rarer ones. In addition, two or more groups of approximately 10 recordings each will be grouped together in rapid succession to produce "simulated point counts," which test a crew member's ability to rapidly identify vocalizations, as is often required in the field. Technicians will also have to identify 30-40 photographic images of birds, generally rarer species or less obvious female plumages (computer CD ROM programs work well for this). Passing the exam should require a near perfect score. Technicians who do not pass should be given feedback on which species they misidentified and be allowed to take the full exam again after they have had a few days to study. The exam needs to be remade (i.e., the order, if not the identity, of the recordings and pictures needs to be changed) before it can be administered again.

Survey Training

Mist Netting

The mist netting Project Lead and interns should review the pertinent components of this protocol prior to the onset of the field season. The mist netting crew will be supervised and trained by the Field Lead. Inexperienced banders are trained intensively at the onset of their internship, with continued training until they are proficient at bird extraction and handling, bird identification, and data collection. Training continues throughout the season by pairing less experienced banders with more experienced crew members and by working with their supervisor.

SOP #2: Training Observers (continued).

Banding Birds

The Project Lead is responsible for instructing interns on all procedures and techniques involved in running the station.

The Project Lead should have read and be familiar with The North American Banders' Study Guide (The North American Banding Council 2001a), The North American Banders' Manual for Banding Passerines and Near Passerines (The North American Banding Council 2001b), The Instructor's Guide to Training Passerine Bird Banders in North America (The North American Banding Council 2001c), and The Field Lead's Syllabus (Ralph et al. 1993). Project Leads should ensure that all trainees have read and understand these documents, excluding The Instructor's Guide to Training Passerine Bird Banders in North America. Copies of these documents should be in each banding kit.

Training will include:

1. Removal from nets. Until trainees are fully competent, they should never be left alone to remove a bird. Instead, the Project Lead should supervise; when a person has not made progress on a bird within 10 seconds, the Project Lead should remove the bird, discuss his/her technique, and then return the bird to the trainee.
2. Recording. Trainees should rapidly become familiar with the data collected, to the point where they anticipate data and do not have to be told the data appropriate for each column (e.g., when told the skull is full, they should automatically and correctly write down the age and how aged).
3. Processing. Trainees should quickly become competent in processing. Training in processing should depend on the number of birds: (A) when only a few birds are to be processed, the Project Lead should record while the trainee bands; (B) with moderate numbers, the Project Lead records for the trainee while also banding; and (C) when it is busy, the trainee records for the Project Lead, while also banding. This enables the trainee to make progress continuously, not just be a spectator.

Bird Identification

Interns at a mist netting site may have little bird identification skills at the onset of the season and will have ongoing training throughout the season. Prior to the season, interns should review the species list from the Oregon Caves National Monument station (Appendix C). Bird identification skills can be improved by (1) studying field guides and bird song recordings, (2) birding in the field and taking the time to locate birds with unknown songs or calls, and (3) accompanying advanced birders in the field whenever the opportunity arises.

Area Searches

The mist netting field crew will undergo training on the area search survey methodology (SOP #7: Conducting Area Search Surveys) at the mist net site. Surveyors will accompany an experienced searcher until they have learned the area search survey methodology and can identify many of the local birds. Area search surveys allow a surveyor time to locate birds that he or she cannot identify by song or call. Hence, an intern completing area searches does not need the expert birding skills of a point count technician, allowing novice birders to complete accurate surveys and improve their bird identification skills.

Recording Data

Interns must be instructed on how to complete each of the data forms and have an opportunity to practice completing them during training, so that questions can arise and be resolved before official data collection begins (SOP #12: Data Entry).

First Aid, Safety, and Emergency Procedures

All Project Leads, technicians, and interns will be working in remote areas; it is therefore essential that everyone, to the extent possible, be prepared for emergency situations. Although providing full-scale training in wilderness first aid is beyond the scope of the landbird monitoring training program, we recommend requiring the crew to read and discuss in detail a simple wilderness first aid booklet prior to beginning field work. Crews should also brainstorm potential responses to theoretical emergency situations and have a clear understanding of what to do if they or someone else on the crew becomes seriously injured or goes missing.

Backcountry Rules and Ethics

Project Leads, technicians, and interns should receive instruction on backcountry regulations for the parks, including permit requirements and procedures, campsite restrictions, food storage, fire season restrictions, etc. Note that some of these rules differ among the parks. If possible, arrangements should be made for a backcountry ranger or other qualified Park Service employee to meet with the crew to discuss these topics. Regardless, it is the Project Lead's responsibility to make sure that all crew members understand the rules they must follow.

Data Entry

Project Leads, technicians, and interns will be trained in data entry according to SOP #12: Data Entry at the onset of the field season. As a group, the data entry protocol will be reviewed. Each pertinent database will be demonstrated on the computer by entering several example records. Time will be allotted for the field crew to practice the data entry system and for questions to be answered.

Training Tracking

The Project Lead will track the training of technicians and interns by recording the trainees' names, dates, and training events in an Excel spreadsheet. For mist netting where training is continuous throughout the season, dates will be recorded for the onset of training and when proficiency is achieved for three overarching topics; bird extraction and handling, bird identification, and data collection.

References

North American Banding Council (NABC). 2001a. The North American banders' study guide. North American Banding Council Publications Committee, Point Reyes Station, CA.

North American Banding Council (NABC). 2001b. The North American banders' manual for banding passerines and near passerines (excluding hummingbirds and owls). North American Banding Council Publications Committee, Point Reyes Station, CA.

North American Banding Council (NABC). 2001c. The instructor's guide to training passerine bird banders in North America. North American Banding Council Publications Committee, Point Reyes Station, CA.

Ralph, C. J., G. R. Geupel, P. Pyle, T. E. Martin, and D. F. DeSante. 1993. Handbook of field methods for monitoring landbirds. General Technical Report PSW-GTR-144. Albany, CA: Pacific Southwest Research Station, U.S. Department of Agriculture, Forest Service.